

**U. S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

1.PROJECT TITLE/PARTICIPANT Environmental Management/Paducah Remediation Services, LLC (PRS)		2. DATE 06/29/07	3. IDENTIFICATION SITE Paducah Project DOE Portsmouth/Paducah Project Office (PPPO)	
4. WBS ELEMENT CODE 04.11.01.05		5. WBS ELEMENT TITLE C-400		
6. INDEX LINE NO. N/A	7. REVISION NO. AND AUTHORIZATION Rev. 0		8. DATE 06/29/07	
9. APPROVED CHANGES N/A				
10. SYSTEM DESIGN DESCRIPTION N/A			11. BUDGET AND REPORTING NUMBER N/A	
12. ELEMENT TASK DESCRIPTION <u>WBS STRUCTURE</u> <p>The scope of this element includes the following subelements.</p> <ul style="list-style-type: none"> • WBS 04.11.01.05.01 C-400 Subproject Management • WBS 04.11.01.05.02 C-400 Remedial Design Support Investigation • WBS 04.11.01.05.03 C-400 Remedial Action • WBS 04.11.01.05.04 LUCIP <u>INTRODUCTION</u> <p>Groundwater beneath the Paducah Gaseous Diffusion Plant (PGDP) is contaminated with trichloroethene (TCE) and technetium-99 (Tc-99). Previous studies of the Northeast and Northwest Plumes indicate the contaminants principally originate from dense nonaqueous-phase liquid (DNAPL) TCE sources beneath the C-400 Building. Electrical resistance heating (ERH) is the documented selected remedy in the approved Record of Decision (ROD). ERH generally is employed as a six-phase heating (SPH) arrangement. For noncircular areas, however, a three-phase heating generally is employed. A three-phase heating arrangement will be employed at C-400.</p> <p>The C-400 Interim Remedial Action (IRA) includes the installation and operation of a three-phase ERH system to heat the subsurface, volatilize volatile organic compounds (VOCs), and remove them by way of a vapor recovery system. In the process of VOC volatilization, steam also will be generated, which will facilitate the stripping of VOCs (primarily TCE and its breakdown products) from the treatment area. The three-phase heating system consists primarily of a network of in-ground electrodes and vapor extraction wells distributed throughout the zone of contamination. Electrical power for the electrodes will be supplied to the ERH system by an electrical feeder originating from the PGDP C-531-1 switchyard.</p> <p>ERH involves heating soil in the saturated and unsaturated zones by passing current between electrodes buried in the soil, with simultaneous injection of water through the electrodes in order to maintain conductivity and to transfer heat by convection. The coupling of electrical heating with heat transfer by convection greatly enhances the efficiency and uniformity of heating by ERH technology. Volatilization of contaminants will be achieved as the temperature in the Upper Continental Recharge System (UCRS) approaches the boiling point of TCE [87°C (189°F)] or the boiling point of the TCE/water mixture at depth below the potentiometric surface of the Regional Gravel Aquifer (RGA). Simultaneous vapor extraction will remove the contaminants from the subsurface.</p> <p>In a typical application of ERH, electrodes are placed strategically in and around the contaminated</p>				

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zone. The pattern of electrodes is designed so conventional three-phase power can be used to heat the soil. The distance between electrodes and their location is determined from the heat transfer mechanisms associated with vapor extraction, electrical heating, and fluid movement in the contaminated zone. Soil vapor extraction wells are located within the contaminated soil. The position of the extraction wells relative to the electrodes is determined so that heat transfer by convection within the porous soil is maximized, thus minimizing heat loss and increasing the uniformity of the temperature distribution. Consideration of the heat transfer mechanisms results in the most effective heating process, hence, a more successful remediation project.

The soil vapor produced from ERH operations will be a mixture of air, water vapor, and high levels of VOCs (primarily TCE). The vapor produced by ERH operations will be as hot as 203°F, and the composition of the gas may be quite variable. Materials used in the vapor treatment system will be rated for the expected temperatures encountered. The soil vapor will consist of a maximum of 1,200 scfm of subsurface air and up to 3,000 lb/hr of steam generated by ERH operations. The soil vapor also may contain up to 20,000 ppmv of TCE and other VOCs. The average concentration is expected to be much less, but the heterogeneous distribution of DNAPL in the soil may result in very high peak concentrations of VOCs.

The vapor treatment system is designed to process the maximum peak loading of the steam and VOCs produced by ERH operations. This system includes an SVE and vapor condensation train designed to remove the vapor from the vapor extraction wells, a cryogenic/adsorption system to remove TCE and other VOCs, and a vapor polishing system that uses vapor-phase carbon and permanganate impregnated zeolite to remove VOCs remaining in the soil vapor. VOCs will be recovered from the cryogenic condenser as an organic solvent waste.

LOGIC RELATIONSHIPS

Interfaces

Internal to PRS

- All PRS project managers and staff
- All subcontractors

External to PRS

- U.S. Department of Energy (DOE) PPPO and support contractors
- DOE Headquarters or other DOE sites (if applicable)
- U.S. Environmental Protection Agency (EPA)
- Commonwealth of Kentucky (KY)
- Site tenants, including United States Enrichment Corporation (USEC); Uranium Disposition Services, LLC; and Swift and Staley Team (SST)
- USEC services in the area of property, information technology, radios, etc.
- SST, particularly in the areas of property management, information technology, and security.
- Nevada Test Site (NTS): Profiling and disposition of newly generated and classified and fissile low-level waste (LLW), if required or applicable.
- EnergySolutions: Profiling, treatment, and disposition of mixed and LLW, if required or applicable.
- Toxic Substances Control Act (TSCA) Incinerator, if required or applicable.
- Commercial Treatment, Storage, or Disposal (TSD) Facility: For treatment and disposal of non-radioactive hazardous waste, if required or applicable.
- Stakeholders
- Citizens Advisory Board and supporting contractor EHI.
- DOE Integrated Safety Management System (ISMS) Verification Team

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<ul style="list-style-type: none">Other non-regulatory key interfaces		
Time Sequencing with Other Work: <ul style="list-style-type: none">Remedial Design Support Investigation (RDSI) must be completed and results evaluated as input to the ERH system design processInfrastructure (overhead crane, TCE tank, below-ground sump, and pump station) must be removed before the asphalt pad is installed at the southeast corner of C-400Asphalt pad must be installed before ERH subsurface components and above ground treatment system can be installed at the southeast corner of C-400Installation, startup, and operations of the ERH system as well as the above infrastructure removal activities will have to be coordinated with ongoing C-400 operations conducted by USEC. As a result, C-400 remedial action work could be impacted by scheduled and unscheduled criticality accident alarm system (CAAS) outages, road closures in the area, or by local work area closures due to ongoing C-400 operations.Delays in the completion of the C-400 IRA could delay follow up Groundwater Operable Unit (GWOU) actions.		
<u>SCOPE DESCRIPTION</u>		
WBS 04.11.01.05.01 C-400 Subproject Management <p>Provide overall management activities associated with this subproject. Activities performed under this subelement include the following:</p> <ul style="list-style-type: none">Perform technical, contractual, and project functions necessary to effectively manage and report scope, schedule, and budget.Maintain all activities within the defined safety, environmental, and quality requirements.Perform technical and personnel management functions.Maintain technically qualified and properly trained personnel.Develop, evaluate, and report project performance metrics.Interface with DOE, KY, EPA, other prime contractors, and stakeholders, as needed. <p>The method(s) used for determining earned value for this WBS element is Level of Effort.</p>		
WBS 04.11.01.05.02 C-400 Remedial Design Support Investigation <p>Conduct an RDSI to gather additional data to improve the remedial system design. The RDSI will be conducted in accordance with the <i>Remedial Design Support Investigation Characterization Plan for the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky</i> (DOE/OR/07-2211&D2).</p> <p>This Characterization Plan presents the basic strategies and procedures that will apply to fieldwork conducted as part of the RDSI and specify the use of a Membrane Interface Probe (MIP) to provide real-time, qualitative characterization of VOC levels in the UCRS and RGA. The Characterization Plan evaluates existing data in relation to a conceptual model of the location of DNAPL zones at the south end of the C-400 Building and identifies 47 locations for soil borings to provide additional characterization of UCRS VOC levels and 29 locations for soil borings for additional characterization of RGA VOC levels. The plan allows for four additional contingency borings to be performed, if needed, to further characterize a specific area. Boreholes subsequently will be abandoned. Investigation derived waste will be characterized, treated (if necessary), packaged, and dispositioned under this subelement.</p>		

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The method(s) used for determining earned value for this WBS element is Actual Unit Completion.

Before beginning fieldwork, the project team must have an internal field review (IFR). For this IFR, the project team will put together a work package. This work package includes the following:

- Work instructions – includes hold points
- Training matrix and evidence of training
- UCD/USQD
- Lessons Learned
- Work authorization and work release from facility managers
- Procedures
- AHA
- Excavation/Penetration Permits
- RWP
- Team Meeting documentation
- Project Organizational Chart

In addition to the above, a Sampling Analysis Plan (SAP), Quality Assurance Plan (QAP), Waste Management Plan (WMP), and Health and Safety Plan (H&S) may be needed for any non-CERCLA actions.

For CERCLA actions, the appropriate FFA/CERCLA documentation will be required which will include SAP, QAP, WMP, H&S Plan, and other documents, as applicable to the action. These documents may require regulatory approval.

The work package and other documentation are developed by personnel that charge to this project and also by personnel that charge to project support service center (i.e., QAP and RWP).

WBS 04.11.01.05.03 C-400 Remedial Action

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/Federal Facility Agreement (FFA) documents pertaining to the remediation C-400 TCE source will be prepared under this WBS subelement. Documents to be completed and associated WBS subelements also are listed below.

Remedial Design Report

A Remedial Design Work Plan (RDWP) was completed under the Bechtel Jacobs Company LLC contract with DOE. This RDWP will be utilized as guidance during the development of the 30%, 60%, 90%, and certified for construction Remedial Action Design Report (RDR). Regulatory approval of the certified for construction RDR then will be obtained. Knowledge from the 6-Phase Treatability Study (TS), as well as the results of a Remedial Design Support Investigation, will be used in the development of the design for full implementation of electrical resistance heating. A technology vendor will provide equipment and design specifications to facilitate system design.

Remedial Action Work Plan

The draft D0 Remedial Action Work Plan (RAWP) will be developed in accordance with the FFA and the RDWP discussed above. It will be submitted for internal review, and then issued to DOE for review and approval. In accordance with the RDWP, a Waste Management Plan will be included in this document. The RAWP also will include a Health and Safety Plan; a baseline and post-operations Sampling and Analysis Plan, a Quality Assurance Plan, and an Environmental Compliance Plan. Comments from DOE will be incorporated and a final draft D1 RAWP will be

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<p>submitted to the regulators for review and comment as a Paducah FFA enforceable milestone. The regulator's comments will be addressed and a final D2 RAWP will be developed and submitted to the regulators for approval.</p> <p><u>C-400 Remedial Action</u></p> <p>The C-400 Remedial Action will be implemented in accordance with the approved RDR and RAWP. Conceptual remedy construction includes drilling and installing ERH electrodes, vapor extraction wells, groundwater extraction wells, subsurface temperature monitoring equipment, water level monitoring equipment, and a steam injection well. Steam-assisted heating is required because the steel shot electrodes from the TS, which were abandoned in place, could cause significant electrical interference with any ERH electrodes installed within the area. A groundwater and vapor treatment system will also be installed to remove VOCs (primarily TCE) from extracted vapor and groundwater. A technology supplier will be contracted to supply equipment and operational expertise during construction and startup of the ERH system as well as to provide assistance during the operations and maintenance (O&M) phase.</p> <p>It is anticipated operation of the three-phase, full-scale deployment in the southeast, south, and southwest areas around C-400 will be completed in approximately eight months. The eight month operational period includes two months of initial heating to bring subsurface to required temperature and six months to remove TCE mass, as described below:</p> <ul style="list-style-type: none">- Assumes approximately 75,000 gallons (~ 900,000 pounds) of TCE to be removed- Assumes 5,000 pounds removed per day after achieving required temperatures <p>The remediation goal of the C-400 action is defined in the Record of Decision (ROD). The ERH system will be operated until monitoring indicates that heating has stabilized in the subsurface and recovery of TCE as measured in the recovered vapor diminishes to a point at which further recovery is at a constant rate (recovery is asymptotic).</p> <p>A Construction Quality Control Plan and an O&M Plan, FFA secondary documents, will be developed and implemented as part of the C-400 action. Waste generated during the operation of the ERH system will be characterized, treated (as necessary), packaged, and dispositioned under this subelement. Repairs/upgrades to the C-416 decontamination pad are also included.</p> <p>Additional activities will include removal and disposition of the out-of-service overhead crane, the empty TCE tank and secondary containment, the concrete sump, the chemical pumping station, the loading platform, the above-ground covered secondary containment pit, and associated underground piping. A request will be forwarded and tracked through the appropriate DOE and USEC interfaces to terminate the lease, as necessary, on the above items prior to their removal.</p> <p>Electrical power for the ERH and treatment systems by an electrical feeder originating from the PGDP C-531-1 switchyard. Electricity is government furnished services & Information (GFSI) and is not included in the baseline estimate under this WBS. Energy requirements are estimated to be approximately 2,200 kW average (2,800 kW peak) for the ERH components and approximately 1,300 kW for the above ground treatment system. The cost of electricity (approximately \$2,561K) for operation of the ERH and treatment systems will be paid to the provider by DOE.</p> <p><u>Remedial Action Completion Report (RACR)</u></p> <p>Following completion of fieldwork, a draft D0 RACR will be developed and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final draft D1 RACR will be submitted to the regulators for review and comment. A final D2 RACR will be developed and submitted to the regulators for approval. The RACR will be developed in</p>		

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<p>accordance with the requirements specified in the FFA.</p> <p>The method(s) used for determining earned value for this WBS element is Actual Unit Completion.</p> <p>Before beginning fieldwork, the project team must have an internal field review (IFR). For this IFR, the project team will put together a work package. This work package includes the following:</p> <ul style="list-style-type: none">• Work instructions – includes hold points• Training matrix and evidence of training• UCD/USQD• Lessons Learned• Work authorization and work release from facility managers• Procedures• Project hazard analyses – including development of project specific Activity Hazard Analyses• Excavation/Penetration Permits• Radiological Work Permit• Team Meeting documentation• Project Organizational Chart <p>In addition to the above, a Sampling Analysis Plan (SAP), Quality Assurance Plan (QAP), Waste Management Plan (WMP), and Health and Safety Plan (H&S) may be needed for any non-CERCLA actions.</p> <p>For CERCLA actions, the appropriate FFA/CERCLA documentation will be required which will include SAP, QAP, WMP, H&S Plan, and other documents, as applicable to the action. These documents may require regulatory approval.</p> <p>The work package and other documentation are developed by personnel that charge to this project and also by personnel that charge to project support service center (i.e., QAP and RWP).</p> <p>WBS 04.11.01.05.04 Land Use Control Implementation Plan (LUCIP)</p> <p>A draft D2 LUCIP will be prepared and submitted for internal review, then issued to DOE for review and approval. Comments from DOE will be incorporated and a final D2 LUCIP will be developed and submitted to the regulators for approval as an appendix to the D1 RDR (90% Design). It is assumed that the regulators will have additional comments and that a D2/R1 will be required. The final D2/R1 will be appended to the D1 RDR.</p> <p>The method(s) used for determining earned value for this WBS element is Percent Completion.</p> <p><u>DELIVERABLES</u></p> <p>WBS 04.11.01.05.01 C-400 Subproject Management</p> <p><u>Element Milestones</u></p> <ul style="list-style-type: none">• None <p><u>Element Deliverables</u></p> <ul style="list-style-type: none">• Paducah PRS Quality Assurance (QA) Project Plan• Paducah PRS Environmental, Safety, and Health (ES&H) Plan• Provide input to the following reports and submittals (if applicable):<ul style="list-style-type: none">◦ Monthly Project Performance Report		

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<ul style="list-style-type: none">o Risk Management Plan Updateso Site Management Plan (SMP)o SWMU Assessment Reporto Semiannual Critical Analysis Reporto Presentationso FFA briefingso Labor determinationso Gold Chart Performance Metricso Annual updates to Site Treatment Plano Annual Compliance Agreement Reporto Annual ISMS Updateo Annual Work Smart Standards Updateo Financial Reporting, Management Analysis Reporting Systemo Annual Statement of Costs Incurred and Claimedo FFA Semiannual Progress Reporto Remedial Action/Regulatory Commitment Tracking Reporto Other reports/documents, as necessary		
WBS 04.11.01.05.02 C-400 Remedial Design Support Investigation <u>Element Milestones</u> <ul style="list-style-type: none">• Procure drilling subcontractor• Issue Excavation/Penetration Permit• Complete Internal Field Readiness Review• Complete fieldwork• Complete waste management/waste disposition <u>Element Deliverables</u> <ul style="list-style-type: none">• None		
WBS 04.11.01.05.03 C-400 Remedial Action <u>Element Milestones</u> <ul style="list-style-type: none">• Issue D1 RAWP to the regulators• Issue D1 RDR (90% Design) to the regulators• Complete removal of interfering infrastructure• Complete installation of ERH components• Complete installation of the groundwater and vapor treatment system• Begin ERH operations• Complete ERH operations• Receive approval of the D2 RACR• Complete waste management/waste disposition• Issue D1 Construction Quality Assurance Plan• Issue D1 O&M Plan <u>Element Deliverables</u> <ul style="list-style-type: none">• 30%, 60%, 90% and Certified for Construction RDR and revisions• D0, D1, and D2 RAWP and revisions• D0, D1, and D2 RACR• D0, D1, and D2 Construction Quality Assurance Plan• D0, D1, and D2 O&M Plan		

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WBS 04.11.01.05.04 LUCIP

Element Milestones

- Issue the D2 LUCIP to the regulators

Element Deliverables

- D2 LUCIP

REQUIREMENTS

- CERCLA/National Contingency Plan
- KY Hazardous Waste Permit (KY8-890-008-982)
- FFA for the PGDP
- SMP for the PGDP (annual revisions)
- Applicable state and federal laws and regulations (applicable or relevant and appropriate requirements)
- PRS ISMS
- UEO-1066, as updated - Lease Agreement between DOE and USEC, Revision 4, dated October 30, 2001
- Enclosure to GDP 95-0018, as updated - USEC and DOE Resolution of Shared Site Issues, Revision 1, dated March 30, 1998
- Applicable PRS plans, policies, and procedures.
- Waste acceptance criteria (WAC) for all applicable treatment and disposal facilities that were in effect on April 24, 2006.
- Applicable DOE Orders
- Applicable Federal Acquisition Regulations (FAR)

It is the core value of PRS that the safety and health of every worker, the public at large, and our environment are the most important assets that we are entrusted to protect. To accomplish this, an ISMS, based on DOE's ISMS, has been implemented that incorporates the five core functions and is based on the seven guiding principles. The objective of ISMS is to systematically integrate safety and environmental protection into the planning and execution of all work activities. The term safety encompasses Nuclear Safety, Industrial Safety, Industrial Hygiene, Occupational Health, Health Physics, and environmental issues. ISMS requirements flow down to PRS subcontractors. The five core functions are (1) define the scope of work, (2) analyze hazards, (3) develop and implement hazard controls, (4) perform work within controls, and (5) provide feedback and continuous improvement. The seven guiding principles are (1) line management responsibility for safety, (2) clear roles and responsibilities, (3) competence commensurate with responsibility, (4) balanced priorities, (5) identification of safety standards and requirements, (6) hazard control tailored to work being performed, and (7) operations authorization.

Prior to a subproject's commencement, several activities must be completed that demonstrate that all involved in the project have completed rigorous health and safety reviews and that all potential hazards of doing the work have been identified. The routine activities in remedial actions are conducted in accordance with standard operating procedures, activity hazard analyses, and Integrated Safety Management plans. Nonroutine work will require a readiness assessment, as necessary, to ensure complete health, safety, and environmental reviews prior to work start. This assessment is conducted by people experienced in similar kinds of work with the right to examine all aspects of a project about to commence and requires that the project team provide documented evidence that any applicable requirements of the job have been met.

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SCOPE ASSUMPTIONS

- The list of solid waste management units (SWMUs) in the SMP is an accurate representation of the SWMUs that will be monitored under this scope of work.
- An additional Proposed Plan (PP) and ROD will not be required to be prepared for evaluations and actions for other source control areas (e.g., SWMU 1) under this WBS element; rather, this element will provide support for continuation of evaluations for the remediation of these other source areas in concert with overall PGDP cleanup.
- Electricity for the C-400 three-phase heating (SPH) remedial action was considered GFSI in the PRS proposal. Assume DOE will pay this cost directly to the provider, approximately \$2,561K expected.

COMPLETION CRITERIA

WBS 04.11.01.05.01 C-400 Subproject Management

- Completion of technical and reporting requirements for source control.
- Compliance with the Resource Conservation and Recovery Act (RCRA) Permit and SMP.
- This WBS element will be completed upon issuance/approval of final action completion reports for the identified other potential sources, or if/when it is decided to conduct final actions for these sites as part of a larger source control action encompassing other additional sites, (e.g., complete SWMU 1 actions through those conducted under WBS 04.11.01.01 Burial Ground Operable Unit).

WBS 04.11.01.05.02 C-400 Remedial Design Support Investigation

- Deliver copies of documents and electronic files to infrastructure contractor for archive and placement in the Environmental Information Center.
- Waste will be disposed of within one year of generation.

WBS 04.11.01.05.03 C-400 Remedial Action

- Approval of the final RACR by the regulators.
- Deliver copies of documents and electronic files to infrastructure contractor for archive and placement in the Environmental Information Center.
- Waste will be disposed of within one year of generation.
- Electrode borings, temperature monitoring borings, water level monitoring borings, and steam injection well borings will be abandoned in place.
- Monitoring wells/piezometers created installed during this project will be plugged and abandoned in place or the responsibility for continued monitoring and maintenance will be taken over formally by the Environmental Monitoring Program.

WBS 04.11.01.05.04 LUCIP

- Approval of the D2 LUCIP by the regulators.
- Deliver copies of documents and electronic files to infrastructure contractor for archive and placement in the Environmental Information Center.

RISK MANAGEMENT

See the Risk Management Plan for analysis.

Risk was mitigated through the following efforts:

- Continue to perform due diligence in all work activities to reduce the possibility of safety incidents.

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- Perform due diligence to ensure that waste is properly packaged and that transportation conveyances are properly loaded.
- Follow waste characterization, packaging, transportation, and disposition procedures and plans.
- Ensure that documents are written professionally and accurately.
- Ensure that fieldwork is carried out safely and in accordance with work instructions.
- DQOs will have qualitative and quantitative statements derived from the DQO Process that clarify study objectives, define the appropriate type of data, and specify the tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions and process knowledge.
- Ensure QA/QC procedures address potential system and equipment failures.
- Provide DOE with the appropriate documentation for the sole source procurement in the consent package.
- Subcontractor will follow ALARA principles and approved decontamination procedures.
- Ensure engineering design planning and review processes meet or exceed a design's intent for implementation.

CERCLA AREAS AND SWMU

SWMU No.	Description
11	C-400 TCE Leak Site
533	TCE Spill Site from TCE Unloading Operations at C-400

BASIS OF ESTIMATE

1. Summary of Site Conditions

- The D1 RDWP and D1 LUCIP have been issued
- The D2 Remedial Design Support Investigation Characterization Plan for the Interim Remedial Action at C-400 has been submitted and approved by the regulators

2. Estimating Methods

☐ Parametric ☐ Bottom-Up ☒ Other: Parametric & Bottom-Up

3. Sources of Estimating

Labor – Technical review of documents to be prepared determined the mix of labor required for document preparation. Echols & R.S. Means were used to determine craft types to be used for construction type activities. Project team meetings were utilized to identify staff types to be used for other areas, such as sample collection and analysis, waste characterization and disposal, health and safety monitoring, etc.

Equipment – Echols & R.S. Means were two printed sources used to determine the types of equipment needed to conduct the work proposed. Experience from technical staff also provided input as to the type of equipment needed. When available, unit price contract amounts were used.

Materials – Same as equipment

Other Direct Cost – Same as equipment

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Transportation – Same as equipment		
Subcontracts – Experience from technical staff provided requirements for the involvement of subcontracts and, where appropriate, subcontract unit rates (contract rates) were used.		
4. Basis of Estimate (Unescalated Values)		
<u>Waste Volumes</u>		
See attached waste performance metrics, as applicable.		
<u>Project Schedule</u>		
See attached schedule.		
<u>Baseline By Year</u>		
See attached Baseline by Year Report.		